

AMENDED IN SENATE MAY 6, 2009
AMENDED IN SENATE APRIL 22, 2009
AMENDED IN SENATE APRIL 2, 2009

SENATE BILL

No. 471

Introduced by Senators Romero and Steinberg
(Coauthor: Senator Alquist)

February 26, 2009

An act to add Article 13 (commencing with Section 33475) to Chapter 3 of Part 20 of Division 2 of Title 2 of the Education Code, relating to education.

LEGISLATIVE COUNSEL'S DIGEST

SB 471, as amended, Romero. California Stem Cell and Biotechnology Education and Workforce Development Act.

The California Stem Cell Research and Cures Act, an initiative measure approved by the voters at the November 2, 2004, general election (Proposition 71), establishes the California Institute for Regenerative Medicine (CIRM), the purpose of which is, among other things, to make grants and loans for stem cell research, for research facilities, and for other vital research opportunities to realize therapies, protocols, and medical procedures that will result in the cure for, or substantial mitigation of, diseases and injuries.

This bill would create the California Stem Cell and Biotechnology Education and Workforce Development Act of 2009 to establish stem cell and biotechnology education and workforce development as a state priority and to promote a stronger link among industry sectors, the ~~California Institute for Regenerative Medicine (CIRM)~~ CIRM, and California public schools. This bill would require the State Department

of Education, in consultation with the CIRM and representatives of the biotechnology industry, to promote stem cell and biotechnology education and workforce development in the department's existing programs, as specified.

The bill would also require the state board to incorporate stem cell science curriculum content into science curriculum framework at its next science curriculum revision. The bill would request that the Regents of the University of California consult with the CIRM and ~~representative~~ *representatives* of the biotechnology industry in developing curriculum for the California State Summer School for Mathematics and Science ~~and it also~~. *The bill, on and after January 1, 2011*, would require the science subject matter project, upon agreement by the Regents of the University of California, in consultation with the CIRM and representatives of the biotechnology industry, to pursue opportunities to include stem cell and biotechnology science in professional development programs.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

- 1 SECTION 1. The Legislature finds and declares all of the
- 2 following:
- 3 (a) If California is to retain its premier position in stem cell
- 4 research and fully realize the medical and economic benefits of
- 5 regenerative medicine, a stronger link is needed between California
- 6 public schools and this emerging industry.
- 7 (b) At the November 2004 statewide general election, California
- 8 voters approved Proposition 71, the California Stem Cell Research
- 9 and Cures Initiative, which authorizes \$3 billion in state bond
- 10 funding for stem cell research at California universities and
- 11 research institutions and added Article XXXV to the California
- 12 Constitution and Sections 125290.10 et seq. to the Health and
- 13 Safety Code.
- 14 (c) Proposition 71 established a new state agency, the California
- 15 Institute for Regenerative Medicine (CIRM), to make grants and
- 16 provide loans for stem cell research and research facilities.
- 17 (d) The ballot pamphlet information and findings and
- 18 declarations of Proposition 71 described how stem cell research
- 19 will lead to the development of life-saving regenerative treatments

1 and cures for a variety of incurable diseases, including cancer,
2 diabetes, heart disease, Alzheimer's disease, Parkinson's disease,
3 spinal cord injuries, multiple sclerosis, and Huntington's disease;
4 and also benefit the California economy by creating projects, jobs,
5 and therapies that will generate millions of dollars in new tax
6 revenues in our state and advance the biotech industry in California
7 to world leadership as an economic engine for California's future.

8 (e) The public funding of stem cell research, combined with
9 significant private donations, has made California the national
10 leader in stem cell research.

11 (f) After President Bush limited federal funding for embryonic
12 stem cell research in 2001, most states eliminated or significantly
13 reduced stem cell research.

14 (g) On March 9, 2009, President Obama issued an executive
15 order lifting restrictions on federal funding for stem cell research,
16 leading other states to move quickly to try to catch up to California.

17 (h) Several recent reports have predicted that California will
18 soon face a dramatic shortage of trained professionals to fill jobs
19 in the life sciences sector and a more widespread shortage of
20 college educated and technically trained workers to meet industry
21 demands.

22 (i) California's growing gap between supply and demand for
23 college educated and technically trained workers is exacerbated
24 by an alarming high school dropout rate.

25 (j) Education must be the cornerstone of California's economic
26 development strategy, and education that is closely linked to the
27 needs of emerging industries is critical.

28 (k) CIRM, in recognition that the rapid progress in stem cell
29 research in California will lead to the development of treatments
30 and cures, to the growth of regenerative medicine and the stem
31 cell industry, and will require an expanding pool of individuals
32 with specialized training and skills, has tentatively made Bridges
33 to Stem Cell Research grants to fund research and training activities
34 for postsecondary students interested in careers in regenerative
35 medicine.

36 (l) CIRM also is developing a "California Stem Cell Education
37 Initiative" aimed at high schools with the goal of broadly educating
38 California pupils about stem cell science and regenerative medicine
39 and creating pathways for careers in the stem cell industry.

(m) The biotechnology industry, in response to an ongoing shortage of appropriately educated and trained graduates to meet its workforce requirements, has invested tens of millions of dollars developing and implementing science and math education programs in California. The California Biotechnology Foundation is releasing a comprehensive directory of these industry programs as a resource for other schools to implement similar programs.

(n) In order to ensure that all California pupils have an opportunity for a career in the stem cell and biotechnology industries and that California fully realize the medical and economic benefits these industries offer, including the benefits made possible by the substantial public investment California has made in stem cell research and facilities, all education policymakers and institutions of public education, and all relevant public agencies and industry organizations, should collaborate and make it a priority to increase stem cell and biotechnology education and workforce development.

SEC. 2. Article 13 (commencing with Section 33475) is added to Chapter 3 of Part 20 of Division 2 of Title 2 of the Education Code, to read:

Article 13. The California Stem Cell and Biotechnology
Education Workforce Development Act of 2009

33475. This article shall be known, and may be cited, as the California Stem Cell and Biotechnology Education and Workforce Development Act of 2009.

33475.1. The purpose of this article is to establish stem cell and biotechnology education and workforce development as a state priority and to promote a stronger link among these industry sectors, the California Institute for Regenerative Medicine, and California public schools.

33475.2. For purposes of this article, the following definitions shall apply:

(a) "CIRM" means the California Institute for Regenerative Medicine.

(b) "Department" means the State Department of Education.

33475.3. The department, in consultation with CIRM and representatives of the biotechnology industry, shall promote stem cell and biotechnology education and workforce development in

1 the department's existing programs, including, but not limited to,
2 all of the following:

- 3 (a) The California Health Science Educators Institute.
- 4 (b) The Health Science Capacity Building Project.
- 5 (c) The California Partnership Academies.
- 6 (d) The regional science resource centers, pursuant to Chapter
7 3.6 (commencing with Section 44770) of Part 25 of Division 3.
- 8 (e) The California Resource Network, including the State
9 Agency Partners Committee.
- 10 (f) Multiple pathway programs pursuant to Section 52372.5.
- 11 (g) The K-12 High Speed Network, pursuant to Section 11800,
12 including its academic content platform.

13 33475.4. The department shall post on its Internet Web site
14 information and links to information about the following:

- 15 (a) Existing biotechnology education programs, including, but
16 not limited to, those identified by the California Biotechnology
17 Foundation.
- 18 (b) CIRM education initiatives and related stem cell education
19 and workforce development programs.

20 33475.5. The state board shall incorporate stem cell science
21 curriculum content into science curriculum framework at its next
22 science curriculum revision.

23 33475.6. The Regents of the University of California are
24 requested to consult with the CIRM and representative of the
25 biotechnology industry in developing curriculum for the California
26 State Summer School for Mathematics and Science pursuant to
27 Chapter 3.8 (commencing with Section 8660) of Part 6 of Division
28 1 of Title 1.

29 33475.7. ~~The~~ *Commencing January 1, 2011, the* science
30 subject matter project described in Section 99201, upon agreement
31 by the Regents of the University of California, in consultation with
32 the CIRM and representatives of the biotechnology industry, shall
33 include stem cell and biotechnology science in professional
34 development programs.

35 33475.8. It is requested that the Independent Citizens Oversight
36 Committee of CIRM, when allocating funds for stem cell research
37 and facilities pursuant to Chapter 3 (commencing with Section
38 125290.10) of Part 5 of Division 106 of the Health and Safety
39 Code, consider education and workforce development in addition

- 1 to other criteria, with the goal of furthering the purpose of this
- 2 article.

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